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| Mr. Michael T. Davis  Calculus | | Chapter 4 – Practice Test  March 1, 2017 | |
| Name: | |

1. Find  given .
2. Determine the value of  given 
3. Determine the value of  given 
4. Find the slope of the curve of  at the point 
5. Find the slope of the curve of  at the point 
6. Determine the value of  given 
7. Determine an equation for the line normal to the ellipse with equation  at the point .
8. Determine  given the parametric curve defined by  and 
9. Determine the value of  given 
10. If , then determine the value of 
11. Determine an expression for  given 
12. Determine the value of  given 
13. Determine an expression for  given 
14. Determine an expression for  given 
15. Determine the value of  given 
16. Determine an expression for  given 
17. Determine an expression for  given . Be sure to give  in terms of x & y and not in terms of x, y & .
18. Given , determine the slope of the curve at the point 
19. If , then 

a. 

b. 

c. 

d. 

e. 

**Optional Extra Credit**

A curve in the xy-plane is defined by .

1. Determine  .
2. Find an equation for the tangent line at each point on the curve with x-coordinate .
3. Find the x-coordinate of each point on the curve for which the tangent line is vertical.